PHILADELPHIA MEDICAL TIMES.

SATURDAY, NOVEMBER 7, 1874.

ORIGINAL COMMUNICATIONS.

OBSERVATIONS ON THE HYPODERMIC USE OF ATROPIA IN MUSCULAR RIGIDITIES, RHEUMATIC AND MYALGIC.

BY J. C. WILSON, M.D.

OF the following cases, one was furnished by the Medical Ward of the Pennsylvania Hospital, where, thanks to the kindness of the attending physician, I had the opportunity of observing the patient and making clinical notes of his condition and treatment. The remainder presented themselves during the past year at the medical clinic of the Jefferson Medical College. I venture to give them to the readers of the *Philadelphia Medical Times* at some length, as they illustrate a disease sufficiently common in this climate, especially among the so-called laboring classes, but which, nevertheless, has not received the attention from writers upon medicine which its frequency and the suffering it occasions demand, and because they at the same time demonstrate most satisfactorily the efficacy of the method of treatment first suggested by Da Costa in the first volume of the Pennsylvania Hospital Reports in 1868, in an article "On Certain Forms of Muscular Rheumatism, particularly Wry-neck and its Treatment."

The disease is that painful muscular rigidity known as chronic muscular rheumatism or chronic myalgia in all its forms; the treatment is the hypodermic use of atropia.

Case I.—G. R., aged 17, born in Germany, by trade a shoemaker, had, in April, 1873, an attack of acute articular rheumatism, in which the joints of the upper extremities were affected, and more severely those of the right side. The attack was of mild type; it lasted some five or six weeks. No discernible cardiac lesion resulted. As the articular pains subsided, the cervical muscles began to give trouble. The neck, first on the right side, then on the left, became painful, stiff; the muscles were hard. Motion was limited, and attended by an increase of the pain. Gradually the head was drawn to the left side. The pain, varying in intensity, but constantly present, aggravated by movements, by pressure, and by atmospheric changes, prevented him from work.

On admission to the Pennsylvania Hospital, November 21, 1873, his condition was as follows: Head drawn strongly to the left side, and slightly backwards, the chin being rotated to the left so that it almost rests upon the clavicle. Left shoulder elevated. Pain constant, dull in kind, referred to both sterno-cleido-mastoid muscles, but severer on the left side, where it extends to brow. Movements of all kinds aggravate it. The muscles, both the sterno-cleido-mastoid and the trapezius of the left side, are hard and tender to even slight pressure. The patient is pale; his expression is indicative of suffering. There is no joint-trouble. Appetite fair. Was ordered atropia, gr. $\frac{1}{60}$, by hypodermic injection, over the affected muscles daily.

December 4.—The following note was made: Pain almost gone. Can move the head freely in all directions; carries it stiffly, and a little to the left. There is still a trifling pain over the upper part of the left sterno-cleido-mastoid muscle, where a little hardness also lingers. The muscles elsewhere feel normal in texture.

The treatment was continued as an occasional injection of atropia, with the addition of ferruginous tonics, the recovery being at this time almost complete.

December 24.—The patient was discharged, cured.

Case II.—J. S. C., aged 65, applied for treatment October 16, 1873. He is a stone-mason, and has been greatly exposed to the weather all his life. States that he had an attack of rheumatism twenty years ago, which affected his legs, and laid him up the greater part of a winter, but thinks he had no swelling of the joints. Since that time has had occasional twinges of pain, and some stiffness of back and legs after working in bad weather. The present trouble began a year ago, with pain in the back of his head. This pain extended into the muscles of the neck, and now extends, he says, down into his throat. The pain is always present, and is aggravated by efforts at motion and by pressure, so that he carries his head very erect, even a little backwards, and to the left. The left shoulder is elevated; the sterno-cleido-mastoid muscle and the trapezius of that side rigid. Cannot turn head to the left, but can to right. Stooping is very painful. The pain is worse at night. Is anæmic, anxious-looking. Has no disease of the heart. No family predisposition to rheumatism. Was ordered extract of belladonna in small doses, repeated till pupils were affected, with quinine and liniments.

After one week of this treatment, no benefit resulted.

October 23.—Atropia, gr. $\frac{1}{60}$, daily, hypodermically, in region of affected muscles.

About half an hour after insertion of the drug he always felt a little dull and confused, and had the usual dryness of throat and dilatation of pupils, with later diarrhœa. In no instance anything like redness of skin. During the treatment he did not have to rise at night to void his water according to habit.

There was decided relief of suffering directly after the first injection.

After eight injections the daily use was abandoned, and only one or two more were made at longer intervals.

November 4.—This note was made: Carries head erect; is free from pain; can turn head as much to the left as to the right, with a little effort. A crackling sound is heard when head is suddenly turned to left side; and there is still some hardness of the muscle of left side. Stoops with ease. Sleeps well. Ordered elixir iron, quinine, and strychnine, ʒi t. d.

These two cases show, the first, a close and evident, the second, a remote and vague, association with attacks of articular rheumatism. Whether this relation is causative or merely accidental is a question not so readily determined as might at first sight be supposed.

The results of extended clinical inquiries fail to establish the dependence of such cases upon the causes that produce articular rheumatism, or that they occur more frequently in those who are of the rheumatic diathesis than in others. Indeed, as the following case shows, an acute attack of sickness of a wholly different kind may be followed by painful rigidity in a group of muscles prone to it.

Case III.—A. C., a German, aged 17, a tailor by trade, applied December 29, 1873, on account of stiffness and pain in his neck. The trouble began in September, after a "severe cold and inflammation of his throat." It has gradually increased till this time. The throat-trouble, which would appear to have been a transient tonsillitis, has disappeared. His condition is as follows: Constant

but not severe pain, aggravated by every movement, on the left side of the neck. Can rotate head to the right, not at all to the left; efforts to do so occasion very severe pain. Carries head stiffly, and tilted to the left. A little general denseness of muscles on left side of neck, —those lying between the sterno-cleido-mastoid and the anterior border of the trapezius being hardest, that is, the focus of the trouble being in the scaleni muscles. Is pale, suffers from acne, and has two or three enlarged lymphatic glands in the post-cervical region.

Treatment.—Atropia, gr. $\frac{1}{60}$, hypodermically, over point of greatest pain. After some minutes the pain was greatly relieved, and motion to a considerable extent restored. Ordered pil. rhei comp., U.S.P., one at bedtime, daily.

The atropia was repeated every third day till January 6, 1874, when (after four injections) he was free from pain; could move his head with ease, carried it in the normal position, and ceased attending. This case was not a severe one; he worked all through it, sewing on his board. The hardness of the muscles vanished under the treatment.

Twice since, at intervals of months, he has had a slight return of the trouble, which a single hypodermic of atropia, gr. $\frac{1}{60}$, has stopped.

Here we have myalgia, of which one of the most important predisposing causes was the depressing influences of sickness. The four cases that follow are myalgia from overwork.

Case IV.—J. K., aged 28, a laborer, applied October 20, 1874. Has had pain and stiffness in the small of his back for two years. This came upon him gradually, and did not prevent his working until a few months ago, although he has for eighteen months had great trouble in lifting heavy loads. At present he cannot bend his back; in essaying to do so, moves his body from the hips at an angle, the back remaining stiff and rigid. When he stoops, he cannot rise without the aid of his hands upon his knees. Gait slow and hesitating, because the slightest jar is painful; and he says that if he stubs his toe he feels as though his back would break. Pain is always present, and increased by all movement.

A careful examination excludes spinal and renal disorders. The erector spinæ mass of muscles on both sides is very rigid, standing out in firm, unyielding columns, which impart to the finger a very different sensation from that of healthy muscles. The left side is a trifle less hard than the right, and on strong effort at bending perhaps relaxes a little.

The man has never had articular rheumatism; has no heart-trouble. He is pale, and has lately lost flesh. He has endured a great variety of treatment, including blistering and hypodermic injections of morphia, but has experienced no relief. Ordered hypodermics of atropia, gr. $\frac{1}{60}$, daily.

October 27.—Has had five injections, some into the subcutaneous tissues, some directly and deeply into the body of the erector spinæ muscles. The effect in relieving pain is the same in each case. He has now but little pain; can stoop and rise, lifting a weight; even bends his back a little. The gain in point of suffering is immense.

Up to November 1, he had in all thirteen injections of the drug, each gr. $\frac{1}{60}$, and ceased attending, reporting himself able to go to work. The muscles were still rigid, especially on the right side, but decidedly less so than when first seen.

Case V.—J. O'H., aged 45, a laborer, came under observation May 10, 1874. He suffers from "lumbago," has great stiffness in back, attended with pain which extends into left hip and across the fore-part of his left leg. It came on suddenly four weeks before, after unusually severe muscular exercise, which was, however, only some fifteen or twenty minutes in duration. Being out of work, he chanced to meet a comrade in the street who was employed as a "rammer" in repairing cobble pavements. With a view to seeking work of that kind, he took his friend's place for a while, "to get his hand in." When he stopped he had great pain and soreness, and could scarcely reach home. For several days movements were very painful, and he was compelled to keep his bed. He slowly improved, and got out again, but has been quite unable to work. Has more or less pain in lumbar region, increased by walking, etc. He cannot stoop without great pain, and, if he does so, is unable to rise without assistance. Erector spinæ affected. The left side harder, fuller, more painful than the right. General health good. Has never had articular rheumatism; occasionally has had muscular pains in shoulders, but never severe enough to oblige him to leave off work.

Treatment: atropia, gr. $\frac{1}{60}$, into left erector spinæ mass.

May 11.—Atropia, gr. $\frac{1}{60}$, into left side.

May 12.—Atropia, gr. $\frac{1}{60}$, into right side. Has less pain; can stoop with relative ease.

May 13.—Feels a great deal better. Pain lingers in hip. Can stoop, walk, run, with ease. Except slight dilatation of pupils, has had no signs of general physiological influences of atropia.

May 15.—Had some return of pain yesterday, after improper exertion. Is better to-day; in fact, has no pain. Some rigidity of the muscular pillars of the back persists. Feels able to go to work.

I injected the atropia five times in all, and have not seen him since. There is the best reason to believe that he would have returned if there had been any further trouble.

Case VI.—C. K., aged 68, a retired seaman, applied June 5, 1874. He has never had rheumatism; is not subject to muscular pains; to use his own expression, "has not had a pain of any kind for thirty years," until ten days ago, when, after an unaccustomed strong muscular effort in helping to lift a barrel of rice, he was at once seized with pain in the small of his back. This was not severe when he was quiet, but very bad whenever he attempted to move, so that for more than a week he was scarcely able to turn in bed. The pain extended from the lumbar region into both thighs. Has a good deal of stiffness now, and cannot stoop to tie his shoes; has to have assistance in rising from his chair. Muscles of the back somewhat hard, with a degree of tenderness on pressure. Has had no fever; tongue clean, appetite excellent. Plasters and various liniments have been, he states, of no service.

Injected atropia, gr. $\frac{1}{60}$. Immediate relief.

July 9.—Reported that the morning after his visit he was able for the first time in ten days to tie his shoes. Injection repeated, and so on at intervals of two or three days, until four were given. Some weeks later he called to say that he had had no further trouble and to express his gratitude.

Case VII.—M. N., aged 45, laborer in a rolling-mill, was first seen October 13, 1874. He has very heavy lifting to do, and has had for four years a severe pain and stiffness in his right arm near the shoulder. This trouble is not constant. When he is at work, warm and sweating, he feels "all right," and can use his arm freely; but as soon as he stops and begins to cool off, the pain and stiffness return, and continue until work or exercise again warms him up. The pain is very severe, and movements of the arm evidently give rise to exquisite anguish; it is worse at night, so that sleep is often impossible. On examination, the arm and shoulder are found to be normal in size and outline, but the right deltoid muscle is a trifle firmer in texture

throughout than its fellow of the opposite side, and is tender to the touch. But at the region of its insertion it is exceedingly hard and rigid, feeling like bone.

Has not had rheumatism. General health good. Expression anxious and careworn. Given belladonna, with a liniment.

Oct. 20.—Returned, not relieved by the treatment. Injected atropia, gr. $\frac{1}{60}$, into subcutaneous tissues near insertion of the deltoid muscle. This was followed by tremor of the arm and quivering of muscles. It was done at Professor Da Costa's clinic, in the presence of the class, and the patient was directed to sit outside a few moments. In ten minutes he returned to the lecture-room, swinging his arm around his head, quite free from pain, and happy, saying, "Oh, if it would only last!" The muscle was quite supple and natural in texture at this time, except at its insertion, where there was a slight denseness, trivial in comparison to the previous condition, which almost resembled to the touch an exostosis. Poor fellow! the relief lasted only a few hours. Once afterwards I injected atropia, with a like result, but he became discouraged, and has not returned.

In reviewing these notes, it will be observed that in Case I. there is a clear history, and in Case II. a doubtful history, of articular rheumatism, in Case III. a history of acute tonsillitis, and that the remaining four are cases of pure myalgia. All were males.

The solution employed was of the strength of gr. i ad ʒv, of which ♏v = gr. $\frac{1}{60}$.

Slight dilatation of the pupils was invariably observed in a few minutes after the injection; very frequently dryness of the fauces, with thirst; occasionally a feeling of confusion and dizziness, which, however, was of short duration. Sometimes diarrhœa was noticed after repeated hypodermics, and the old stone-mason (Case II.) was relieved of his usual necessity of rising at night to void urine, while under treatment. The belladonna eruption was not observed in any of these cases.

With a smaller dose than one-sixtieth of a grain, say one-eightieth or one-hundredth, I have failed to obtain the prompt relief afforded by that dose, and I have found doses larger than one-sixtieth unnecessary.

In Case II. small inflammatory nodules occurred in the integuments at two of the points of injection, but disappeared in a few days without suppurating. Other than this I have seen no local inflammatory action follow hypodermics of solution of atropia.

In these cases relief was not only decided, it was also prompt, and in six of the cases effectual. In Case VII. it is no more than fair to presume that a continuation of the treatment in conjunction with rest would have resulted favorably.

It would be foreign to the purpose of this paper to enter upon the discussion of the essential pathological condition underlying these cases. At some future time I hope to publish a brief summary of the opinions that have obtained in reference to this form of painful disease of the voluntary muscles. At present my object has been to so group a number of cases as to illustrate with definiteness the nature of the trouble under consideration, and to show the effects of a special treatment.

Whether the cause of the common symptoms be rheumatism of the muscles, or hyperæmia, or inflammation with slight serous effusion, or partial paralysis of vaso-motor nerves, with escape of serum into the intimate tissues of the muscles, or a neuralgia of the minute nerve-twigs supplying the muscles, it is certain that the terminal nerves are thrown into a state of irritation which expresses itself in pain and in spasm.

Spasmodic contraction occurs at first, as a rule, only when the muscles are brought into use; later, a condition of tonic spasm, a spastic rigidity, comes on; and, finally, such tissue-changes take place as to lead to great impairment or absolute loss of function with or without atrophy.

In the earliest stages, that is, in the acute form, I have not found atropia beneficial. Hypodermics of morphia, on the other hand, have been serviceable in allaying the pain and inducing repose, but this quite independently of any local action. But later, when the disease has become chronic, or in some cases when it is from the outset of the chronic form and the element of spasm is present with more or less rigidity, atropia used locally is, as the cases show, of prompt and certain benefit. There seems the strongest reason to believe, both from clinical observation and from the researches of experimental physiologists, that the benefit arises from the direct sedative effect of the drug upon the nerve-filaments, and that it thus, by relieving the irritation, relaxing the tonic contractions, and putting an end to pain, enables the circulation and nerve-supply to resume their normal course and relations.

But after a long time, when permanent changes have taken place in the tissues, it is useless to hope that any treatment will restore to the muscles their suppleness and contractility. But even then much may be done by this means in relieving pain, and enabling the patient to avail himself of supplementary and auxiliary muscles in performing customary movements (vide Case IV.). Contrary to the experience of Wood, who states that the drug must be thrown "directly into the muscle" (vide Wood's Therapeutics, p. 222), I have found that the effect is the same whether it be injected directly into the muscle or into the subcutaneous tissue overlying it; and I recall clinical lectures of Dr. Da Costa's, in which he stated that the injection might be made, and that he had repeatedly tested this point, into distant parts of the body, with a result scarcely less decided than when in the immediate vicinity of the rigid and painful muscles.

Let me add that in looking over the literature of this kind of muscular rigidities I have been struck with these points: first, the absence of anything like a direct recognition of the fact that the rigidity is at first spastic; and second, the uncertainty, not to say inutility, of the long list of remedies adduced for the relief of this trouble, which, trivial as it certainly is in point of prognosis as regards life, is to the working-man most serious, since it is extremely common, very painful, and too frequently absolutely unfits the sufferer for long periods of time from earning his livelihood. A recognition of the fact, then, that the rigidity is, in its earliest stages, a form of tonic spasmodic contraction, coupled with our knowledge of the action of atropia upon muscular

spasm, has led to a systematic and thorough trial of this treatment, the notes of which are given to the profession.

SUDDEN DEATH FROM RUPTURE OF A UTERINE CYST (EXTRA-UTERINE PREGNANCY?).

BY A. K. MINICH, M.D.

MRS. K., aged 35, mother of eight children, the youngest a suckling, retired, feeling well. At 11 o'clock, same night, she was seized with violent pain in the lower portion of the abdomen. I saw her for the first time the next morning at 8 o'clock, and found her in a state of collapse. The mind was clear, and her chief complaint was of great pain in the hypogastrium. Her surface was cold, and covered with a clammy sweat; the pulse feeble, ranging from 144 to 160 per minute. The uterus was normal in position. She was ordered quinine and brandy, but died at 3 P.M., sixteen hours after the attack.

The autopsy was made thirty-six hours after death. There were no signs of inflammatory change in the abdomen. A basinful of blood-clots was scooped from the lower portion of the abdomen, with about two-thirds of a bucketful of dark-colored blood. Upon the right side of the fundus of the uterus, corresponding to the junction of the Fallopian tube, was a lacerated opening, which looked into the abdomen. This opening was about the size of a pea, and communicated with an empty sac, which, when distended, would probably have been as large as a hulled walnut. The sac did not communicate with the Fallopian tube or the cavity of the uterus. Its walls were very thin, and free of clots or deposits. The blood-vessel through which her life ebbed so slowly yet surely away was very small, being scarcely perceptible. She had menstruated one week beforehand.

NOTES OF A CASE OF TÆNIA.

BY P. F. HARVEY, M.D.

THE following case is related as being of interest from the large amount of carbolic acid administered without apparent benefit.

Dr. C., a physician of middle age, consulted me April 22 of this year, on account of a tape-worm that had troubled him for a considerable period, the removal of which he had attempted but a short time previous. From several cases that I had seen reported as successfully treated with carbolic acid, I suggested this remedy as likely to destroy the parasite in his case. Concurring in my opinion, he began on the following morning by taking simultaneously one ounce of castor-oil and two pills of pure carbolic acid, each containing one grain. This dose was followed by two of the pills every two hours until sixteen had been taken. During that day there was no restriction of diet.

April 24, morning.—A powder of rhubarb and jalap, of each ten grains, was taken. One ounce of castor-oil was given at 5 o'clock P.M. At bedtime patient took two carbolic-acid pills, with three comp. cath. pills. Diet restricted to a cup of coffee for breakfast.

April 25, morning.—One ounce of sulphate of magnesium was administered, together with two carbolic-acid pills. Waited till 3 o'clock P.M.; from that time until 9 o'clock P.M. patient took four carbolic-acid pills every two hours, making eighteen pills taken during the day. Fasted until noon, eating very sparingly then, and taking a plate of soup at 3 o'clock P.M.

April 26.—At 7 o'clock A.M. took one ounce of castor-oil, with forty-five drops of turpentine, accompanying the dose with three carbolic-acid pills. At 10.30 A.M. took one-half ounce of koosso. Fasted the entire day. At 1 o'clock P.M. passed four or five feet of tænia; at the same time he took two croton-oil pills, each containing one-half drop of the oil, and an injection of one ounce of magnes. sulph., in eight ounces of water, was administered. At 3 o'clock P.M. took one ounce of castor-oil. At 4.30 o'clock P.M. passed a *tænia medio-canellata* entire, twenty-five feet in length, and at the same time a small one, eight inches long.

Remarks.—The treatment was commenced by giving sixteen grains of pure carbolic acid, in divided doses, on the first day; ten grains were given on the second day, eighteen grains on the third day, and three grains on the fourth day; using aperients and cathartics freely, and keeping the primæ viæ free by abstinence from food. Thus within three days *forty-seven* grains of the pure phenic acid were given without accomplishing the dislodgment of the worm, although amply assisted by free catharsis. Both Dr. C. and myself were of the opinion that the effect of the acid upon the parasite was nearly if not quite nugatory. The koosso, aided by evacuants, acted promptly and thoroughly. In two and a half hours after its exhibition the worm began to pass, and by keeping up the evacuant action the two entozoa were passed entire within six hours after the anthelmintic had been given.

FORT PREBLE, MAINE.

NOTES OF HOSPITAL PRACTICE.

PHILADELPHIA HOSPITAL.

CLINIC OF DR. H. C. WOOD.

Reported by Dr. JOHN GUITÉRAS.

A CASE OF MILK-LEG IN THE MAN.

H. S., æt. 28, German; admitted September 16, 1874; a clerk by occupation; was engaged as a corporal in the Franco-Prussian war. Last spring he was constantly exposed to wet and cold, working as a trackman on a railroad between York and Columbia. During May he was attacked with a very obstinate diarrhœa, due to the exposure, or perhaps to the limestone water that he was forced to use. He was very much debilitated by the profuse diarrhœa, so that he was unable to work for ten weeks before the development of the present trouble. The first symptom was pain in the right knee, which was in a day or two followed by some swelling, and shortly afterwards blue and red spots began to appear over the leg. The swelling continued; the leg became very hard, and the discoloration extended until the limb became black and blue all over. There never has been much pain connected with the disease, and on the 17th, when Dr. Wood first saw him, the greater extent of the discoloration had been replaced by a marked paleness.

The leg is at present (Sept. 19) swollen, and of about the normal temperature. It might appear to be œdematous, but it is very hard, and does not pit upon pressure. This hardness is but little marked in the foot; is

much more so in the calf, becoming very decided in the lower two-thirds of the thigh. The discoloration occupies at present the inner and outer surfaces of the thigh. Four or five weeks after the appearance of the first symptoms, the opposite leg began to be affected. It is now swollen, quite pale, and the seat of patches of discoloration and of some hardness; though not to the extent of the other. He states that both the extremities retain their usual sensitiveness.

After detailing the history of the case and pointing out the present symptoms, Dr. Wood remarked substantially as follows: This man, then, after much exposure, and malnutrition, is attacked with a diarrhœa, due, it may be, to the use of hard water, and which, though not dysenteric, as shown by the absence of pain and bloody stools, is very exhausting, the stools being large and frequent. After eight or ten weeks he finds his legs affected with pain, swelling, and discoloration. About the constitutional affection and early symptoms we know nothing. He probably must have had some fever.

Now, what is the matter with this man? In the obstetric wards you have seen legs resembling this. A few days after labor, a similar condition may come on, generally affecting first the left leg, and accompanied with marked symptoms of constitutional disturbance. The pain and swelling are soon followed by excessive hardness, the limb feels like a board, and the peculiar shining whiteness of the skin has given to the affection the name of milk-leg.

Dissection has shown that the constant lesion in these cases is a thrombus, or coagulum of blood, in the veins of the affected limb. It is commonly taught that this coagulum is due to phlebitis, and very generally there is inflammation of the veins, as has been shown by post-mortem examinations; but in many cases there is simply a coagulum of blood, and no evidences of inflammation can be detected in the coats of the vessel. Along with the stoppage of the veins there is an occlusion of the lymphatics of the leg, and in some cases there are marked evidences of angeioleucitis; but these are coincident phenomena, not essential to the disease. In the lying-in woman these lesions seem to be due to the passage through the veins of matters perhaps putrescent, or fragments of broken-down clots from the uterine veins. The disease affects much more frequently the left leg in women, and two explanations of this clinical fact have been advanced. In the first place, the right primitive iliac, in its course from the left side of the vertebral column to the right of the pelvis, crosses almost at right angles over the left primitive iliac vein, which is running from the right side of the column to the opposite side of the pelvis. So decided is the pressure of the right iliac artery on the left vein, that in cases where the clot extends into the iliacs there is a marked groove in the vein at this spot. Other obstetricians assert that the vessels of the left side are much more often subjected to pressure by the frequency of the left occipital positions.

The case before us is exceptional, in that the subject is a man, and in that the right leg was first affected. But it has followed the general rule that rarely one leg alone is affected, and seldom both are attacked at the same time. As in the present case, the second leg is rarely so severely implicated as the first.

As already stated, milk-leg is common in the puerperal woman, but it is rare in the male, and occurs almost exclusively in those who are broken down by excesses or are the subjects of diathetic disease. It is not very rare in advanced phthisis, where we see either milk-leg or milk-arm. Another common cause of milk-leg is cancer; why, is not positively known.

In cases of abdominal cancer, it may be thought that there is a direct propagation of the local affection or of the inflammation excited by the cancer to the vein; but milk-leg occurs in cases of thoracic as well as abdominal cancer, so that it must be due to diathetic, not local causes.

Dr. Trousseau especially dwells upon this connection between cancer and milk-leg, and even gives to this affection of the limb a diagnostic importance: thus, he narrates a case of supposed simple ulcer of the stomach, which he asserted to be cancerous upon the supervention of milk-leg, and in which an autopsy confirmed his diagnosis. In another case of general weakness and dyspepsia, Trousseau found the same complication sufficient ground for the diagnosis of carcinoma, though no evidence of a local lesion could be detected, and he was unable to decide where the carcinoma was located. After death, a cancer of the pylorus was found, which did not mechanically interfere with the functions of this opening. In our case the liver and spleen are not enlarged, the lungs and heart and all the other organs seem healthy. In the absence of any indication of local disease, and in the fact that the patient has been always a hearty and hale man, and is under thirty years of age, are to be found sufficient reasons for discarding any fears of the existence of a malignant tumor. Looking for another cause, Dr. Wood stated that he had seen at least one case evidently due to the rheumatic diathesis. Just as there is a rheumatic endocarditis, there may be a rheumatic phlebitis. If you remember the pathology of the blood, you will know that in most of the cachexiæ there is a condition of hyperinosis or excess of fibrin. It exists in cancer, in the wasted consumptive, and in the rheumatic; and it is accompanied with a tendency to a spontaneous coagulation of the blood. As has already been stated in cancer, milk-leg is not due to a propagation of the local disease, for it occurs independently of the location of the tumor. Apparently, there are two reasons to explain the action of the cachexia of cancer and of consumption: 1, the tendency to coagulation, due to the excess of fibrin; and 2, that want of nerve-power that predisposes to inflammation on very slight causes. In rheumatism you have the system irritated by a poison which, so often lighting upon the heart, may at times light upon the veins, and you have, moreover, marked hyperinosis. Diseases have their rights as well as persons, and in the complete absence of indications of a rheumatic diathesis we cannot force the present case under that class. Finally, being unable to trace it to a traumatic origin, we are obliged to believe that the continued diarrhœa has produced a condition of cachexia in our patient, which is the sole cause of the inflammation. The involvement of the second leg seems to be due to the washing of a clot into its veins, or more generally to a propagation of the disease from the veins of the sound leg. It is evident that any loose venous clot must, however, tend rather to be carried towards the centre than the periphery. The setting loose of a solid mass in the circulation may occur in many conditions, such as heart-disease, and even sometimes in varicose veins. When a vein is occupied by a coagulum, the occluding clot always protrudes into the larger vein, and very generally offers a conical and more or less ragged end, due to the constant washing of the blood passing along the patulous vessel. A small piece may be carried into the circulation, to the right side of the heart, and thence into the pulmonary arteries, where it is at last arrested, cutting off the supply of blood from some section of the lung. If this is extensive, the patient is seized with a sudden sense of agony and mortal fear, with a terrible feeling of suffocation, which distinguishes embolism of the right from embolism of the left heart, where we have syncope instead of suffocation. If the branch occluded be large, the patient may perish in a few moments. If the patient

survive, following the infarctus, you have the symptoms of pneumonia, or of collapse of the lung,—such as dulness, cough, and bloody expectoration: there is, however, no true crepitant râle, but a coarser one. The peculiar bloody sputa may become in a day or two very fetid, and then we have a condition of gangrene.

In the stage to which the present case has arrived, there is hardly any danger of such accident occurring. The clots are pretty well consolidated, and probably the ends are dissolved and washed away. In examining this limb with a view to a prognosis of the case, we must remember the anatomy of these veins. Three sets of vessels return the blood from the lower extremities, viz., the venæ comites, the external saphenous emptying into the popliteal, and the internal or long saphenous, all the veins eventually emptying into the femoral vein. So that by occluding the latter you prevent almost all the return, except what may occur by anastomosis with the superficial, abdominal, and the obturator veins. Of course your prognosis depends on the chances for the blood to return: these are sometimes so small that gangrene very soon sets in. In this case there is in the right leg an intense hardness over the track of the internal saphenous vein, which affects the tissues so generally that the vessel cannot be felt as a cord, as it must have been at first. The popliteal space is also very hard, showing that this vessel must be pretty well occluded. The femoral vein feels like a hard cord, somewhat sensitive to pressure. On this same right side the impulse of the artery is less than normal, showing that the blood-supply has accommodated itself to the existing circumstances. In the left leg the trouble is mostly below the knee, the femoral vein being pretty well opened. The further history of these clots varies a good deal. The worst transformation is that they become harder and harder, uniting with the vein into a fibrous cord; the next and most general consists in an organization and contraction of the clot, and the formation of an irregular space between it and the wall; this leaves the vein partially obliterated and divided up into a series of chambers, through which the blood passes. In other cases the clot breaks up and is dissolved by the blood, owing, doubtless, to its alkalinity. In the present case there is no danger of immediate death, and it is very probable that the left leg will recover completely, and the right partially. The softening and diminution of swelling show that the blood is returning, but it will be some time before he will regain motion and the natural softness of the parts.

Treatment.—During the first stage one might be inclined to treat it as an inflammation, by antiphlogistic methods; but there is generally connected with the trouble some cachectic condition. If there is rheumatism, this should be treated. In most cases the leg is to be covered with lead-water and laudanum, and quinine to be given to sustain the system; but the period for any such treatment in our case has passed away. The leg of the patient is wrapped in cotton-wool, surrounded by oiled silk, not because it is cold, as in arterial embolism, but to produce a sort of constant vapor-bath, and bring about a condition of perspiration which may remove the serum exuded into the cellular tissue of the part. It may probably be of benefit to paint the track of the vessels with iodine, hoping to aid in the absorption of the clots. This will be done in the present case, as it is at least harmless. The man will be given abundant and nutritious diet, and we must also support his system by the administration of iron and quinine.

October 7, 1874.—Improvement commenced directly after the lecture, and has steadily continued. The patient has been kept upon the use of Basham's mixture and quinine, and has been steadily improving. To-day he is able to walk about, and, though pale and anæmic, feels much stronger. His appetite is good, bowels regular, and tongue clean. The discoloration has disappeared above the knee, and there is but a slight bluish tint below. There is some induration yet about the calf and lower part of the thigh, but this, he says, almost disappears when lying down. The left leg is almost normal. There is some pain yet in the right popliteal space, and some tenderness over the femoral vein of the same side; this has a cord-like feel, and the lymphatic glands over it are infarcted.

October 16.—Improvement has continued, and there is nothing but very slight pain and a popliteal stiffness left in the right leg. The left leg has completely recovered.

UNIVERSITY OF PENNSYLVANIA.

SERVICE OF JOHN NEILL, M.D.,

Associate Clinical Professor of Surgery.

CURE OF INVERTED TOE-NAIL WITHOUT EVULSION.

THE first case I present for your inspection and study this morning is one of "inverted" or "ingrowing" toe-nail. This is the term which is probably familiar to you all, and, although it does not truly express the nature of the affection, it is that which is in ordinary use. The affection is so common that in an audience like this there are doubtless present one or more sufferers from this malady.

The pain and suffering are often so great as to prevent the patient's walking without limping; and sometimes the toe is lost from the disease, especially when it is not properly treated.

In looking at this toe you will see that it is red and swollen at its extremity, and more especially upon its inner edge. The greatest amount of soreness is usually found at the outer edge of the toe.

Very often the edge of the toe which presses upon the side of the nail is more elevated than it is in this instance, and is covered by fungous granulations which are very sensitive, and the cleft containing the nail is filled with an offensive purulent discharge.

This affection belongs to civilized life. Savages and plantation-negroes do not suffer from it, because they do not wear tight shoes, which are really the exciting cause. The effect of tight shoes, however, is not to make the nail grow into the flesh, but to push or press the flesh over the nail. The direction of the growing nail is not so much altered as is supposed, and, instead of the nail growing into the flesh, the flesh grows over the nail. Unfortunately, the usual treatment of cutting off the corner of the nail, or slicing off the edge which is apparently at fault, only aggravates the complaint by allowing the flesh to be still farther pressed into such a position that the nail when it grows must again "grow into" it.

Not only does cutting the corners and edges of the nail do harm, but many of the remedies applied are equally injurious. Scraping the nails, cutting out V-shaped pieces from their free edges, and complete evulsion, though recommended by many surgeons, I believe to be entirely useless and attended with unnecessary pain. There is a philosophic mode of treatment which is always successful, if properly carried out; and, as we have shown that the flesh grows over the nail, the flesh is to be pushed away from the nail. In the case which is before you this treatment can be readily employed; but even in cases in which the nails are buried in pus and sensitive granulations, the result is equally certain. The time that is required for the cure depends not so much on the duration of the disease, but on the damage which has been done by cutting the nail; and the deeper and more thoroughly the offending edge of the nail has been removed, the longer will be the process of reparation required.

If the nail has not been cut, it can be cured in a few weeks. If it has been cut away, it will require just long enough for the nail to grow again, which may be four months.

In commencing the treatment, first clean and dry the parts from all offensive secretions and pus. This can be done with a camel's-hair pencil, or a piece of sponge, but still better by using a small swab made by rolling a small amount of carded cotton about the end of a probe. The ordinary silver probe will not answer, because the point or bulb at its end, as you see, prevents the cotton being slipped off when it is soiled. I have, therefore, probes made out of No. 16 knitting-needles, which answer the purpose admirably. This same apparatus will also be found useful in wiping out the external meatus of the ear. The little brush of cotton can be readily made on the end of this instrument, and can be as rapidly removed after it has been used; and with it you can gently wipe the most sensitive granulations, and obtain a thorough examination of the parts. If the granulations are very luxuriant, it is best to direct our treatment exclusively to them for a few days, and they can be rapidly reduced by brushing them over with the nitrate of silver either in solid form or in solution, if this latter is the more convenient mode of application. Besides the nitrate of silver, a solution of the chloride of zinc or Monsel's solution can be used with great benefit in reducing the granulations and diminishing the discharge. After the granulations have become less sensitive, but before they have entirely disappeared, you commence the real treatment. After drying the surface with the cotton brush, it is to be covered with a layer of collodion. Then, by means of the other end of this probe, which has been flattened out and rounded into a packing instrument, a dossil of cotton is to be carefully pressed between the flesh and the nail and cemented into its place by another layer of collodion. A dossil of cotton may also be tucked under the anterior free edge of the nail and secured in the same manner if this edge has not been already cut away. This dressing will usually retain its position without much trouble; but to make it more secure a narrow strip of adhesive plaster may be applied around the toe. In two days the toe should be again dressed, but the cotton should not be removed unless it is moist and saturated with pus. After a few dressings the discharge will cease and the cotton will remain dry, and then it should not be taken out, but a fresh dossil should be thrust in alongside of that which is already beneath the nail, and coated with collodion. You will soon be able to press a wedge of cotton beneath the front edge of the nail, and bring it out beneath the side which has been pressed against so long by the fleshy granulations. After this has been accomplished, the cure is very rapid. The ordinary shoe can be worn, and the dressing need only be renewed twice a week. The patient must now be instructed in this process of packing and wedging the cotton under the edge of the nail and fastening it in its place by means of collodion, and he never need have an inverted toe-nail again, and will be thankful that you did not subject him to the painful operation of evulsion.

TRANSLATIONS.

"SYPHILIS" OF THE HARE (Bollinger, *Virchow's Archiv*, Bd. 59, Heft 3 and 4).—Up to this time no accurate observations have been made of the pathological anatomy of the disease which is seen among hares, and which is called by hunters "syphilis." Bollinger has recently had the opportunity of making post-mortem examinations on the bodies of three of these animals that suffered from this affection. He finds that the pathological changes which result from this process consist of characteristic new growths of heteroplastic nature, which take the form of tubercles of larger or smaller size, which are principally found on the genitals, especially in the testicles and prepuce and in the uterus and ovaries, but also in the connective tissue beneath the common integument at any point. These tubercles, when seated in the testicle, have a tendency to involve the coverings of that gland, and may cause ulceration, leading to perforation.

The same tubercles are also met with in the muscles, lungs, liver, spleen, kidneys, and in the lymphatic glands of some portions of the body. When seated beneath the skin, they can also lead to penetrating ulcers which may become quite extensive. Under the microscope, these deposits at some places, by the growth of small cells which they contain, present a resemblance to tubercle as seen in man; at others they have a certain correspondence with cancer; while still another series of these tubercles have a marked similarity to syphilomata.

The tubercles which present this last resemblance are characterized by a diffuse, not sharply-defined, proliferation of round cells, which by means of outgrowths from these gradually involve the sound tissues. Another characteristic which they possess is their tendency to disintegration, so that the tubercles become partly softened and cheesy. Bollinger thinks that this disease is a constitutional one, which is transmitted by sexual intercourse, which is in many respects analogous to tubercle or syphilis in man, and is not inaptly characterized by the name syphilis which has been given it.

W. A.

OBSERVATIONS ON THE ACTION OF ERGOT (Dr. A. Wernich, *Berlin. Klin. Wochenschrift*, No. 27, 1874).—Dr. Wernich has developed a new theory of the action of ergot. This drug, according to him, does not exercise a contractile influence on the muscular coats of the arteries, or, indeed, upon organic muscular fibre in general, as has hitherto been commonly taught, but has, on the contrary, a depressing effect upon the tone of the vessels, and more especially upon that of the veins, so that the blood accumulates in them while the arterial system becomes relatively empty, and a secondary stage of contraction follows. In support of this view, he adduces the microscopic conditions which have been found in animals upon which he has himself experimented, and also the results of similar investigations which have been conducted by others. There has always been found a congestion of the venous system, while the arteries have been empty. The heart of the frog has been observed to beat more strongly while a diminished and insufficient amount of blood passes through it; and if poisonous doses of the drug are administered to the animal, this organ is found in a condition of diastole.

He thinks, further, that a critical examination as to the blood-pressure when injections of ergotin have been made will support the view that there is primarily a depression of the pressure in the arteries, followed by a gradual increase of tension. Finally, if the supposition that the first effect of the exhibition of ergot is to produce contraction of the arteries be correct, he considers it impossible to explain the curative effects of this treatment upon aneurism on physical grounds. In accordance with his theory, and supported by the well-known observations of Oser and Schlesinger, he explains the uterine contraction which results from the use of ergot by an anæmic irritation of the nervous centres whence the impulse to contractions of the uterus come.

W. A.

PHILADELPHIA

MEDICAL TIMES.

A WEEKLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

PUBLISHED EVERY SATURDAY BY

J. B. LIPPINCOTT & CO.,

715 and 717 Market St., Philadelphia, and 25 Bond St., New York.

SATURDAY, NOVEMBER 7, 1874.

EDITORIAL.

WHOSE FAULT IS IT?

ACCORDING to General Eaton, of the National Board of Education, during last year eight millions of dollars were donated in the United States by private citizens to educational endowments. We would like to know how much of this money went to the endowing of medical schools. Our opportunities for hearing of such donations are very good, but, so far as our knowledge extends, scarcely one dollar of the amount was given to medical schools, except what was bequeathed by Mr. Hopkins, of Baltimore. Where in this country is the medical school that has any endowment funds? Where are the salaried chairs that shall enable their occupants to accomplish some original work? Where are the medical scholarships to aid the struggles of those young men who are rich in intellect but poor in money? Colleges and universities spring up like magic; institutes of science up and down the land open wide their doors for gratuitous or partially gratuitous instruction; great sums of money, millions upon millions, are commanded for every kind of education except medical. Is any science more important than that which treats of health and life? Are education and training more necessary to the man who deals with physical problems than to him who struggles against disease and the arch-champion, death? Left to their own devices, the medical colleges savagely avenge themselves upon the people of this land by pouring forth annually a mass of raw material, whose powers and activity for destruction the All-wise can alone measure.

To our thinking, the people are, however, to be more pitied than blamed in this matter. The profession seems slow to learn that its own salvation as well as the good of the laity demands medical endowments. More than this, many of the profession, while recognizing the needs of the hour, fail to come up to their plain duty in the matter. "Ask for money! I would not do it for the world; my patients would not stand it," or words to that effect, we have heard over and over again. Men of the widest reputation are so timid that they dare not talk face to face with the person whose life, it may be, they have saved,—dare not talk honestly and plainly as a man ought to talk to a man when the gravest interests are at stake,—men of the widest experience becoming as bashful as a hysterical girl, at the mere thought of "begging." Is this right? Does a physician lay aside his manhood when he practises his profession? In business life, the closer the relation the more freely do men speak to one another about such matters; and why is a doctor any better or any worse than a business man? Is it the man whose life is saved that does a favor to the physician by employing him, or is it the physician that confers a favor upon the patient by his skill? We have no sympathy with that unmanly state of mind which hinders its possessor from talking fairly and squarely to any man about his duty to give, and about the needs of the hour. Wisdom and tact are of course required to know when and how to approach, but there is a time and a manner for every one, and, properly done, the effort will heighten the physician in his own esteem and in that of his friends, and will bring a steady increase of influence. How many doctors are there in this city or in this country who are a living force among the people? How many are there whose influence is wasted, even to death, by want of use! If every doctor in the land were habitually looking for opportunity to speak a word in season, medical colleges would soon be among the richest. A half-dozen physicians, all with one or two exceptions very young men, in this city have within the last two years shown what might be done, by raising nearly eight hundred thousand dollars in money and land for the University Hospital. The success of this effort demonstrates that the profession needs only that its members should feel their public responsibilities, and should play their parts like men, in order to have those endowed colleges and laboratories which can alone enable it to be as a body what it ought to be.

WILL IT PAY TO DO WHAT IS RIGHT?—An enthusiastic public meeting was recently held in Boston for the purpose of raising money to build a suitable building for the Medical Department of Harvard: seventy-five thousand dollars were subscribed in the room. It was stated that the success of the new method of teaching is absolutely assured. This year about *one hundred new* students have entered for the medical course. As the fees are two hundred dollars a year for three years, an annual income of one hundred students means an annual income of from fifty thousand to sixty thousand dollars.

We believe Harvard has the only rapidly-growing class on the continent, and it apparently soon will have, if it has not even now, the *best paying* medical class in the United States.

It is stated that when the contemplated building is finished, the Society for Medical Improvement will deposit in it their valuable collections, to be used in teaching. The *Boston Medical and Surgical Journal* asserts that the Harvard School will soon be the great medical educational centre of America. If all the other schools continue to hug the delusion that in this country there is no demand for, or appreciation of, other than half-educated doctors, we fear "Ichabod" will be truly written over their door-posts, and Harvard really reign supreme in spite of the natural disadvantage of being in a comparatively small and isolated city.

NORTHAMPTON COUNTY MEDICAL SOCIETY.—Some one has favored us with a copy of the *Easton Free Press*, containing an account of the annual meeting of the Northampton County Medical Society. It is stated that a lively discussion occurred following the very excellent address of Dr. Traill Green, on the duty of the physician when patients call in a second physician before discharging or notifying the one in attendance, and without informing the second of the attendance of the first. We should think there was hardly room for discussion upon such a point. The procedure seems to us an insult to the doctor chosen as well as to the one discarded. One thing is very certain: if the physicians of Northampton County follow to the full the courses inculcated by Dr. Green, they will be like brethren dwelling together in unity.

THE WOMEN.—A school of medicine for women is about to be put in operation in London, in consequence of the earnest efforts of such men as the late Dr. Anstie, Dr. T. K. Chambers, and Mr. Ernest Hart. Among the Professors already appointed are Dr. T. K. Chambers, Practice of Medicine; Mr. Berkeley Hill, Surgery; Mrs. Garrett Anderson, Midwifery; and Mr. Crichett, Ophthalmic Surgery. On the list of the Council we notice the names of Burdon Sanderson, Hughlings Jackson, Prof. Huxley, and Dr. W. S. Playfair. The last public act of Dr. Anstie was, as dean of the faculty, to apply to the medical examining bodies of London for recognition of the school as a duly constituted teaching body. Until this is done, the students of the school will not be admitted as candidates for degrees. The answer of the examining bodies had not been made public at the date of our latest advices. In this city the corner-stone of a new building for the Women's Medical College was laid October 1. The County Medical Society of Hartford, Connecticut, has elected a Mrs. Dr. — or a Dr. Mrs. (which should have precedence? the sign of wifehood and presumably of maternity, or that of the chosen calling?)—Ellen E. Hammond.

POISONOUS MUSHROOMS.—A recent grand jury in London rejected a bill of indictment against a gardener for causing the death of a fellow-servant by administering poisonous mushrooms. The killing was really the result of a deplorable mistake. We give, from the charge of the judge, the following tabulation of Prof. Bentley as showing the general characters separating poisonous from edible mushrooms, premising that all fungi which grow under trees are suspicious and should be rejected:

"The edible mushrooms grow solitary, in dry, airy places, and are generally white or brownish; they have a compact, brittle flesh; do not change color when cut by the action of the air; juice watery, and odor agreeable; taste not bitter, acrid, salt, or astringent. The poisonous mushrooms, on the contrary, grow in clusters, in woods and dark, damp places, and are usually of a bright color; their flesh is tough, soft, and watery, and they acquire a brown, green, or blue tint when cut and exposed to the air; the juice is often milky, the odor commonly powerful and disagreeable, and the taste either acrid, astringent, acid, salt, or bitter. These characteristics are almost invariable."

LEADING ARTICLES.

THE PRESENT STATUS OF TRANSFUSION.

THE operation of transfusion, which has for many years been hanging on the outskirts of advancing medical science, with an occasional nod of recognition from an obstetrician, or a few words of encouragement from a passing physiologist, has of late been receiving a good deal more attention than formerly, and seems

at last in a fair way to have its merits examined into and its defects carefully criticised.

During the past year the various medical and scientific journals of this and other countries have frequently contained communications on the subject, new forms of apparatus have been devised, new methods of operating have been suggested, and the procedure has been attempted under various circumstances and in a variety of diseases.

The recent accumulation of facts in this direction has, indeed, been so considerable as perhaps to render not unprofitable the task of hastily reviewing the ground already traversed and considering briefly the prospects of the operation in the future. It is, of course, impossible in an article of this kind to do more than sketch in the most cursory manner the various appliances, methods, and observations which have been put forth: we shall, therefore, only indicate some of those which seem of the most importance.

And first, as regards apparatus, we may allude to the modification of Dieulafoy's aspirator suggested by Dr. Howe,* of New York, and the somewhat similar invention of Moncoq, of Paris.† The latter is described as consisting essentially of a glass cylinder in which moves a piston. From the lower part of the cylinder two tubes proceed, containing such an arrangement of valves that the blood enters by one and escapes by the other. The object of the piston is to reproduce by its alternate movements the cardiac diastole and systole. To use M. Moncoq's expression, "It is a real heart of crystal placed between the two subjects." The blood taken directly from the vein is immediately transferred to the corresponding vein of the patient, by means of a hollow needle placed within the latter, with which one of the tubes is connected.

The great merit claimed by M. Moncoq for his apparatus is the reproduction of the cardiac movements, and the absence of all danger from coagulation, the transfusion being truly immediate. In addition, M. Moncoq claims that the risk of phlebitis through introduction of air is avoided, and, the blood being introduced slowly and by regular undulations, the organism has time to become habituated to its new conditions. It will be observed that neither of the instruments alluded to differs materially from that of Dr. Aveling, described in the *New York Medical Record*, April 1, 1874, which consists of a hollow rubber ball in place of Moncoq's glass cylinder.

In connection with these forms of apparatus, the question of mediate or immediate transfusion is of interest. According to the method introduced, we believe, by Prof. Martin, and until recently most usual, the blood taken from the veins of the giver was received in a properly-warmed vessel, deprived of its fibrin by whipping and straining, and then injected in a defibrinated condition.

M. Moncoq, however, states—and he gives this as one of the reasons which actuated him in devising an apparatus for immediate transfusion—that careful examination of the statistics of the operation had convinced him of the impropriety of the mediate method. He asserts that a very large proportion of the cases in which defibrinated blood had been employed, terminate fatally.

Dr. Howe's reasons for using his modification of Dieulafoy's apparatus are based on similar views of the dangers and inconveniences of the mediate method.

"The blood," he remarks, "being exposed for a length of time to atmospheric influences, is liable to receive deleterious ingredients. In the process of defibrination, a quantity of red globules, the chief nutritive and stimulating element of the blood, are necessarily entangled in the meshes of the fibrin and are removed with it. In cases where the hemorrhage has been great, the time spent in defibrinating may be of vital importance. The wounds in the veins being large, there is more or less danger of phlebitis or thrombosis."

The fact is that this question is as yet undecided, well-known names being arrayed on either side. Dr. Playfair remarked at a meeting of the Obstetrical Society that the physiological fact of the uselessness of the fibrinous element of the blood in transfusion is "generally admitted." He believed, too, that defibrination is the best method of preventing coagulation, and that the use of the mediate method permits the operation to be performed leisurely, and obviates all hurry and fuss.

Dr. B. W. Richardson urged defibrination of the blood on the same occasion; while Dr. Barnes, perhaps an equal authority, expressed decided opposition to the method.

In this country, also, opposition has been expressed to defibrination, Dr. A. Flint, Jr., having stated recently‡ that unmixed blood must be regarded as the only physiologically satisfactory fluid for transfusion, while Dr. James Chadwick§ regards the presence of fibrin as indifferent.

It is to be hoped that when the circumstances and methods of the operation are finally settled, some less complicated apparatus shall be devised than those heretofore in use. With the exception of Dr. Aveling's apparatus for direct transfusion, most of the instruments in use are not likely to prove available for the general, and especially for the country, practitioner, though they may be useful in hospitals. We do not often meet with such an example of fertility of resource as was displayed by our confrère Dr. J. M. Junkin, of Easton, in the incident related by him at a recent meeting of the Pennsylvania State Medical Society.‖ His account of the operation is so graphic that we wish there were space here to transcribe it in full; but we can only say that the man who, in a lonely farmhouse, performed transfusion successfully by means of

* New York Medical Record, March 30, 1874.
† Transfusion instantanée du Sang, Paris, 1874.
‡ New York Medical Record, April 1, 1874.
§ Boston Med. and Surg. Jour., July, 1874.
‖ Medical Times, May 22, 1874.

"a glass female syringe with a curved neck, and bulb on the end of it," compels the tribute of our respect.

Concerning the use of transfusion in various forms of disease, many single cases have been recorded by different experimenters, mostly going over old ground, and inconclusive in their results. Meynert has made use of the method in cases of melancholia; Kalischer, in cholera; Klingelhofer, in gastric ulcer; and others in phthisis and other affections.

The latest investigations have taken another direction, and now the question of the day turns upon transfusion by means of blood taken from the lower animals, —a subject of too much importance to place at the end of an article, and of which we shall therefore postpone the consideration until a future occasion.

(To be continued.)

CORRESPONDENCE.

LEIPSIC, October 14, 1874.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—In accordance with the conditional promise to send you an occasional letter from this place, I forward an account of two matters which have here attracted a good deal of attention. As, however, the least conceited of us like to hear good things of ourselves, let me mention first that not long since I met the chief editor of one of the leading Berlin medical journals. He knew that I was an American, but not that I was a Philadelphian, and, in course of a conversation upon American medical matters, remarked that the *Philadelphia Medical Times* was the best American journal that came to Germany. Now to business.

To-day we celebrated here the jubilæum of Professor Ludwig, who has completed his twenty-fifth year as Professor of Physiology.

As an investigator, Ludwig is well known throughout the world; but the enthusiasm with which he has been able to inspire those who have studied under his direction, and the warm—I might almost say affectionate —feeling with which all his students regard him, must be seen to be appreciated. To-day such an occasion has offered itself, and any one who had the opportunity of being present must have been convinced that it is, sometimes at least, possible to be both investigator and teacher, in the fullest sense of the words.

At twelve o'clock assembled together in the Physiological Institute not only those who are at present students in the institution, but also many who in past years have had the benefit of Ludwig's teaching. Besides these, his contemporaries, Helmholtz and Du Bois-Reymond, as well as the venerable Weber, came to add by their presence to the interest of the occasion.

An exceedingly life-like bust of Prof. Ludwig had been executed for the occasion, and this, together with an album containing the photographs of all his old pupils, was presented to him. From Russia also came a compound of clock and inkstand, chiefly interesting on account of certain engravings on its surface representing various instruments devised by Ludwig for the furtherance of physiological research.

There was, of course, a series of congratulatory speeches, to which Professor L. made short and feeling replies, and a number of telegrams were read from various faculties and learned societies throughout the continent.

Later, a dinner was given at the Hotel Hauffe, at the commencement of which, from his place between Helmholtz and Du Bois-Reymond, Ludwig paid a tribute to the memory of those of his students who had died, and in their honor a toast was drunk in silence.

Then Ludwig's health was drunk with all the honors, and afterwards his immediate neighbors were toasted, and the characteristic speeches in which they responded were in the highest degree interesting. Prof. Weber also was addressed in the most complimentary terms, and then general toasting was carried on with most laudable activity. Dr. Kronecker, to whose exertions the very successful execution of the day's programme was in great measure due, came in for a flattering and warm demonstration.

I may be pardoned for mentioning that America was not unrepresented in the oratory of the occasion, Mr. C. S. Minot, of Boston, having made an exceedingly happy speech.

The dinner lasted until quite late, and afterwards the party was received by Professor Ludwig at his own house. In every way the celebration was an extremely interesting one, and the number of participants who came from great distances, and the success which many of them have already attained in various branches of science, went far to prove not only the estimation in which they held him whose jubilæum they celebrated, but also the great value of a sound early scientific training, even though its special direction is not that which the student eventually follows; and so to-day mathematician and physicist vied with chemist, physiologist, and anatomist in shouting "Hoch!" in honor of the teacher Ludwig.

On the 9th of October occurred the first case of cremation in Siemen's furnace, recently constructed for the purpose, in Dresden. The body was that of the wife of Sir Charles Dilke, M.P., who in her will had given directions that it should be thus disposed of. Permission was obtained from the authorities in Dresden, after deposition had been made that the cremation was regarded in the light of a scientific experiment; and the body, which had been previously embalmed in England, was conveyed to the building containing the furnace. Here it was placed in an oak coffin without a lid, and after it had been introduced into the furnace the process of incineration began, all its steps being readily observed through a door constructed for this purpose. After the lapse of six minutes the wooden coffin was destroyed; in ten minutes the external muscles were completely consumed, and in barely twenty minutes the entire skeleton was exposed, and had begun to crumble; at the end of half an hour the viscera were being rapidly consumed, and at the close

of an hour the bones were reduced to powder. Fifteen minutes later, the ashes were in a fit state to be collected for preservation in an urn. The complete incineration, if the account from which the above was extracted be accurate, was accomplished more rapidly than might have been expected from experiments previously made. The loss of watery matter which necessarily occurs during the embalming and afterwards, may account for this in some measure. Siemen's furnace consists of a fire-brick hearth or oven, with a movable iron top, which can be readily moved aside to admit of the introduction of the body, which is lowered in from an upper story, where the funeral party are assembled. The heat is obtained through the burning of a mixture of gas and air, which is at first caused to heat the hearth from the outside, until most of the moisture is driven off from the body, and afterwards conducted directly into the chamber itself. As soon as charring is thoroughly accomplished the gas is turned off, and merely heated air passes through, the carbonized and glowing mass being thus rapidly supplied with oxygen, and, of course, rapidly consumed. Under ordinary circumstances the first or drying-out part of the process lasts from an hour to an hour and a half, and the whole process perhaps three hours.

October 28, 1874.

To the Editor of the Philadelphia Medical Times:

DEAR MR. EDITOR,—Your remarks upon medical education always appear to me laden with meaning of the deepest importance both to the profession and to the general community, and I sincerely hope you may never weary of the subject so long as anything in the way of improvement is left unattained.

But a paragraph which I saw in the *Times* of the 17th instant bears so strongly upon the same subject that I have ever since been looking in vain to see some allusion made to it in your editorial columns. The paragraph I allude to is copied from the *Homœopathic Review*, and is headed "Slow Progress of Homœopathy in Great Britain." It states, *inter alia*, that there are eighty-seven towns of from ten thousand to one hundred thousand inhabitants in England which have no homœopathic physician.

However much the blessed state of those eighty-seven towns is to be envied, I greatly doubt if they have any equals in this country. Every one knows our deplorable condition in this respect. But how is this state of affairs to be explained? Simply by the fact that in England the average practitioner is a man of much higher professional attainments than the average doctor in this country.

Although homœopathy and gross ignorance of everything which really makes medicine a science may be regarded as convertible terms, yet this fungus has grown to its present enormous proportions in our midst just because in a large proportion of cases—how large I believe it to be I dare not say—the physician does more harm than good with his drugs, and the homœopathist gains a reputation for success by leaving his patient severely alone.

On the Continent, homœopathy has made even less progress than in England, and for the same reason; and although this medical mysticism was originated by a German enthusiast, it has never succeeded in effecting a lodgment in the land of its birth,—that land of enthusiasts.

The spread of homœopathy in this country is to the medical profession a handwriting on the wall, with a finger pointing to a warning TEKEL.

If our schools were based upon a system similar to that of the German universities, homœopathy would soon be numbered as one of the errors of the past.

Very truly yours,

S. Q. Lapius.*

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

Thursday Evening, Oct. 8, 1874.

The President, Dr. Wm. Pepper, in the chair.

Sclerosis of the posterior columns of the spinal cord.

Dr. R. M. Bertolet presented two specimens of this condition, which will form the subject of a later communication to the *Philadelphia Medical Times*. Also, sections under the microscope of the spinal cord presented at the last session, which had been compressed by syphilitic gummata encroaching upon the bodies of the vertebræ.

Dr. Pepper said that he enjoyed the opportunity, while in Paris, of examining many of Charcot's preparations of the spinal cord at the Salpêtrière, from which the true lesions of infantile paralysis had first been demonstrated. The number of carefully-made observations has now so much increased that it is no longer questioned that one form of infantile palsy depends upon this lesion of the groups of nerve-cells in and near the anterior horn of gray matter.

In regard to this case of sclerosis of the posterior columns, the lesion was the usual and characteristic one of progressive locomotor ataxia, and he believed that the patient from whom the specimen had been obtained, and who had been under his care for some months before his death, had first presented the symptoms of that disease soon after his penis and scrotum had been amputated by a single stroke of a large knife, occasioning copious hemorrhage.

Dr. Harrison Allen did not know whether Dr. Pepper supposed that any relation existed between the peculiar accident and the phenomena of the paralysis, but he thought it not unreasonable that there should have been, conceding the announcement of a favorable predisposing condition. The surgical shock of such

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* The editors of the *Times* do not hold themselves or the paper in any way responsible for the statements of correspondents, but only for the fact that correspondents are men of standing in the profession. The columns are open alike for all shades of opinion in regard to professional matters. Editors are as apt to be mistaken in their views as other men of equal judgment and opportunities. By free discussion only can reforms be brought about in a country constituted as is the United States.

an operation, particularly if the organs were excited, must have been very considerable, and could readily have extended to the spinal cord.

Epithelial cancer from the male urethra.

Dr. J. E. MEARS presented a secondary growth from the meatus urinarius of a man aged 40, which was referred to the Committee on Morbid Growths, which reported, October 22, as follows:

"Dr. Mears's tumor removed from the urethra is an epithelial cancer. The papillæ are covered with dense layers of larger flat epithelia, and contain concentrically laminated pearls."

Aneurismal perforation of trachea.

Dr. R. M. BERTOLET presented the specimen, from Annie S., æt. 34, who was admitted to the Philadelphia Hospital but a short time before her death. She was suffering with chronic bronchitis; had a dry hacking cough; slight expectoration, at times tinged with blood; voice very hoarse, often completely aphonic. No radial pulse could be detected in left wrist. Upon Sept. 10 the resident physician, upon his visit, found her sitting in a chair, complaining of feeling a little indisposed. Shortly afterwards, she suddenly fell to the floor, and was expiring by the time the physician—still in the ward—reached her. Spasmodic respiratory efforts were made at long intervals, with blood flowing from her mouth and nostrils. She was dead in less than two minutes.

Autopsy had to be limited to the thorax. Internal surface of the manubrium of the sternum is slightly eroded by the pressure of the aneurismal sac. Lungs are apparently healthy; smaller bronchi filled with clotted blood; valves of the heart competent. The aorta is atheromatous. An aneurismal sac, about the size of a hen's egg, filled with laminated coagula, arising from the transverse arch of the aorta, and partially involving the innominate branch, has greatly compressed and flattened out the anterior wall of the trachea, one inch above the bifurcation. Several of the cartilaginous rings are eroded at this point, and the underlying mucous membrane is perforated. A large clot, extending into the bronchi, is found adherent to the margins of the ulcerations. The tracheal and bronchial mucous membranes are highly inflamed and thickened. A secondary dissecting aneurismal tumor, of nearly the same size as the first, has formed upon the ascending portion of the aorta, and is likewise filled with a clot. The right recurrent laryngeal nerve is firmly adherent to the aneurismal tumor. Most probably its compression was attended with paresis of the right vocal cord, thus accounting for the troubles in phonation. Unfortunately, no laryngoscopic examination was made.

Dr. ALLEN said that the specimen was one of a very interesting class. He alluded to a case reported by Mr. Fullerton, in which an aneurism of the arch of the aorta passing up between the trachea and œsophagus actually ulcerated into both. Hæmatemesis and hæmoptysis had occurred during life.

Cystic liver from a rat.

Dr. A. C. W. BEECHER presented the specimen, for Dr. ISAAC E. ROBERTS. The rat was found dead, lying in the middle of the cellar floor. Because so found although no poison had been laid for rats, curiosity as to the cause of apparent sudden death led to the post-mortem examination.

The rat appeared to be an old one, was well nourished, but not fat. When opened, the stomach was found distended to its utmost capacity with material resembling moist dirt, having no appearance of food. The intestines were entirely empty. It was neglected to observe whether or not there was an obstruction at the pylorus. The liver was covered with cysts about the size of a pea, each cyst containing a worm from one and a quarter to one and a half inches long. The liver-structures seemed to be healthy. The specimen was referred to the Committee on Morbid Growths, which reported, October 22, 1874:

"In each of the numerous cysts contained in the rat's liver presented by Dr. Beecher, was found coiled up a single worm, averaging fully an inch in length, with numerous transverse segments (over a hundred proglottides were counted in a single specimen). The caudal joints are contracted and filled with ova. The double row of hooklets upon the head, numbering thirty-two in all, each supplied with the characteristic claw, determines this parasite to be a tænia solium."

Acute pericarditis; hypertrophy of heart from previous disease.

The PRESIDENT presented the specimens, from James —, æt. 9; was admitted to the Children's Hospital on September 21. Only very imperfect information of his past history could be obtained. It was stated that he had had symptoms of rheumatism two weeks previously, and that on former occasions he had had attacks of that disease. No symptoms of heart-trouble had been noticed. On admission, there was no swelling or tenderness of any of the joints. There were orthopnœa, great præcordial distress, complete anorexia, and marked general prostration. The pulse was small, quick, and irregular, averaging from 140 to 160 per minute. There was slight præcordial bulging; the area of cardiac dulness was greatly extended, reaching from third rib down to line of apex in sixth interspace, and extending from right margin of sternum to left of line of left nipple. This was evidently due to hypertrophy of the left ventricle, as the impulse was heaving and extruded and reached as far as the lowest limit of dulness. A thrill was felt near left border of sternum. On auscultation, a strong systolic mitral murmur was detected, together with very marked churning and rubbing friction-sounds, whose seat of greatest intensity was along left border of sternum.

He was treated with small doses of calomel (gr. ¼ to gr. ½) frequently repeated and pushed to mild salivation; tr. digitalis, gtt. v every four hours; blisters to præcordia, absolute rest, nutritious fluid diet, and ʒi brandy four times a day. He improved quite rapidly, and in the course of ten or eleven days was able to sit up in a chair, with quite easy breathing, pulse of 85 to 90, fair appetite, no præcordial pain, and diminishing murmur and friction-sounds. Unfortunately, owing to a sudden change in the weather, or to imprudent exposure, he contracted pleuro-pneumonia of the left side on the twelfth day, and died in forty-eight hours.

At the *autopsy*, a moderate amount of pleuritic effusion was found on left side, with consolidation of lower lobe of left lung. The pericardial sac was greatly enlarged: on being opened, it was found to contain four fluid-ounces of blood-stained hæmatin. There were signs of intense pericarditis; around the apex and for a distance of one and a half inches up the body of the heart, the two serous layers were matted together by grayish glutinous lymph. The rest of the serous membrane was coated with false membrane, for the most part not very thick, and with reticulated arrangement. Corresponding to seat of most intense friction-sound were two large patches (one on each layer of the pericardium) of firm lymph, arranged in parallel transverse ridges. The *heart* was greatly hypertrophied, weighing, with the pericardium attached, over eighteen ounces. There was marked thickening of walls of left ventricle, with considerable dilatation of cavity. The mitral valves were thickened, and their edges fringed with small vegetations. The aortic valves were competent, but were slightly thickened, and had a row of small vegetations on their ventricular surface, near the free border of the leaflets.

GLEANINGS FROM OUR EXCHANGES.

EMPYEMA TREATED BY FREE INCISION (*The Boston Medical and Surgical Journal*, October 22, 1874).—Dr. J. T. Boutelle reports the case of a boy, æt. 19, who, after repeatedly catching cold, was compelled to take to his bed, with fever, severe pain in right side, etc. When first seen, he had been in this condition for six weeks, was greatly emaciated, had a marked hectic flush, and was sweating profusely both night and day. The physical signs showed that there was a large collection of fetid pus in the right pleural cavity, and an opening in the lung itself near the apex. He was first tapped with an aspirator between the seventh and eighth ribs, about two inches from the lower angle of the scapula, and three pints of brown, fetid, thick, frothy pus were removed. Stimulants and nutrients were ordered in large quantities, and his condition improved somewhat. Four days later, an operation was performed for the purpose of establishing permanent drainage. A knife was passed between the eighth and ninth ribs, about an inch to the right of the lower angle of the scapula, into the pleural cavity, and the incision slightly enlarged on withdrawing the blade. No pus escaped. An india-rubber drainage-tube was then pushed in about five inches, and secured by straps of adhesive plaster. The pump of the aspirator was attached to the tube, but no pus could be drawn through. After injecting a little warm water, without helping matters, the tube was drawn out, the clots were removed from its calibre, and it was re-introduced, but still no pus could be drawn through it. The tube was removed, and a canula introduced, but with no better result. As the patient was growing very weak, crying out with pain, and threatening to faint, the canula was removed, and a poultice applied over the incision.

After an interval of five days, during which his condition rather deteriorated, it was decided to give ether, and to make an opening between the ribs large enough to give exit to pus. A trocar was thrust between the seventh and eighth ribs, at the point where pus had been first found, and, as it began to flow through the canula, the latter was removed, and an incision three inches long was made through the skin, the point of puncture being at the middle of the incision. A careful dissection was made down to the pleura, the cavity of which was opened by an incision of two and one-half inches. About three pints of fetid pus escaped. On examination with the finger, a long, smooth line of adhesion was found a few inches below the incision, passing downward and backward, evidently the bottom of the sac of the abscess.

For nearly two weeks after this operation he continued to do well, his appetite being much improved. It was then found, however, that the opening in the pleura had entirely closed by granulations. The patient was again etherized, the union was easily broken up with the finger, and an opening made the length of the original incision. Not much bleeding. About a pint and a half of excessively fetid pus escaped. A rubber tube was then inserted, and the cavity thoroughly syringed out with warm water containing a trace of carbolic acid. The tube was then fastened in by adhesive strips.

The same treatment was continued, the thorax being washed out daily with warm water; but the patient gradually sank, and died about three weeks after the last operation. No traces of tubercle were found in the lungs.

Dr. Boutelle calls attention to the following points:

The condition of the patient; the long duration of the disease, the excessive sweating, painful bed-sores, and general prostration rendering it a most unfavorable case for operation.

The immediate relief and gain in strength which followed the evacuation of the pus, the general condition steadily improving up to about two weeks before his death.

The rapidity with which the large incision granulated together, which shows the necessity of guarding against this at the time of operation, by stuffing with lint, or inserting tubes.

The absence of tubercular deposit in the lungs after so much inflammatory disturbance.

The result of the second operation, when no pus was evacuated, showed that it is not *always* safe to enter the thorax very low down. The autopsy showed that this point was nearly two inches too low to enter the cavity.

DEATH FROM THE ENTRANCE OF VOMITED MATTER INTO THE LARYNX (*The Lancet*, October 3, 1874).—Mr. W. W. Smyth reports the case of a child, four years of age, who was under treatment for two small abscesses of the scalp. A small opening was made in one, and the contained matter gently pressed out. During the performance of this trifling operation the boy began to cough, and showed symptoms of suffocation, which were attributed to spasm of the glottis. He revived a little, and was carried to a bed, but in a few minutes the attack returned. He was given nitrite of amyl by inhalation, followed by artificial respiration and electrical stimulation, and, these failing, by tracheotomy. This was also of no avail, and the child soon died. There was no history of his having had anything in his mouth, and nothing could be discovered by careful examination, but the autopsy next morning revealed a piece of partially digested mutton, about the size of a bean, in the larynx, and the right bronchus full of vomited matter. The stomach had evidently thrown up its contents during the opening of the abscess, and, fear paralyzing or otherwise interfering with the sentient apparatus of the glottis, the vomit had been allowed to enter the windpipe.

DISLOCATION OF THE SPINE (*The Irish Hospital Gazette*, October 1, 1874).—Dr. F. W. Warren reports a case of injury to the spinal cord, produced by indirect violence applied to the vertex. There was a displacement forwards of the fourth and fifth cervical vertebræ, with laceration of the inter-vertebral substance. There was at first complete paralysis of motion, including the upper extremities, with partial anæsthesia. Reflex phenomena were excitable in the lower limbs, and there was slight recovery of motion in the toes twelve hours subsequent to the receipt of the injury. Death occurred in about thirty-two hours, being preceded and followed for one hour by a very high temperature, ranging from 103° to 105° Fahr.

SUPPURATIVE INFLAMMATION OF THE GALL-DUCTS (*The Lancet*, October 3, 1874).—Dr. William Bates, F.R.C.S., a distinguished English physician, recently died, after a final illness of only three days. He had, however, been a great sufferer for several years from the passage of gall-stones, and from coincident epileptic seizures. During his last sickness there were jaundice, retention of urine, and coma, but no pain or tenderness over the liver. A post-mortem examination was made twelve hours after death, and the following interesting appearances were observed:

On making an accidental incision into the liver, bubbles of gas escaped freely; the blood was fluid everywhere. On exposing the liver, which was very large, the surface appeared like polished port-wine-colored marble, many patches of lobules, well defined, being more deeply colored than the rest. But what attracted special notice were aggregations of whitish spots here and there, some of them being slightly raised,

suggesting at once disseminated cancer. They proved to be the terminations of dilated bile-ducts filled with pus; some were quite as large as peas, and looked like round cysts on incision. On the concavity of the right lobe, the ducts in one place were enlarged to the size of one-eighth of an inch in thickness, and presented whitish branchings, just like bluish branchings produced by liver flukes. One long white patch was found to be an old cicatrix. The gall-bladder was concealed by old adhesions to the omentum and mesocolon. On dissection, the common duct was found to be so much enlarged that it appeared almost exactly like a portion of small intestine. The gall-bladder was enlarged but not distended. It contained many small black polyhedral calculi, like those which were passed during life, with a thin fluid containing brownish flakes resembling fæcal matter rather than bile. The hepatic duct was distended by two large and irregularly-shaped calculi for about two inches and a half; they were each about the dimensions of a bantam's egg, though not the same in form; many projections on each were impacted in enlarged ducts which opened into the hepatic; had they been smooth and roundish, the common duct would have been quite capable of allowing them free egress. All the ducts everywhere were proportionately dilated, and contained calculi of every intermediate size, from marbles to large grains, just like renal lithic gravel. Literally, reckoning these, there were thousands of calculi.

The enlarged ducts were traced, without any difficulty, but simply by free incisions, to the white spots already mentioned.

MISCELLANY.

THE CRY OF THE CHILDREN.—Public attention in France has been much directed of late to the great decrease in the population during the last eight years. The census of 1872 shows a diminution of 370,000 since the census in 1866. Among the causes assigned for this remarkable decrease are, the enforced celibacy of the large standing army of France, the diminution of births in the marriage state, and, lastly, the excessive mortality among infants. One of the first medical men who called attention to this neglect, M. Brochard, affirmed in 1866 that, reckoning pauper children, 100,000 nurse-children die annually in France of hunger, privation, want of proper care, and want of superintendence. The Academy of Science endorsed this statement by crowning the work in which it was embodied. Soon after, M. Felix Boudet renewed this sad accusation, by declaring before the Academy of Medicine that France loses every year by its own fault 120,000 young infants under one year old. This first stage of life gives a considerable proportion of death-rate everywhere, and an eminent statistician has given striking expression to this fact in the observation "that a new-born infant has less chance of living for a week than a man of ninety, and less chance of living a year than a man of eighty." In France, however, in ordinarily favorable vital conditions, M. Bertillon calculates that, up to one year of age, the death-rate averages 21.7 per 100; that is to say, more than a fifth of the children born die at the end of the first year. In Paris, out of 54,000 children who are born every year, nearly half die before their fourth year; and if the children sent out to nurse be reckoned separately, it will be found that at least one-half (51.6 per 100) have perished in the first year of their life. Finally, if the children be classed according to their position in life, and the kind of nurse with whom they have been placed, the almost fabulous death-rate of from 75 to 80 per cent. is attained, which seems incredible even when we find it stated in official records. The Academy of Medicine has taken up this terrible blot on the civilization of France, and has issued a code of laws for the protection of infant life. Among the causes mentioned in this programme as productive of the general mortality, and which may be reached by legal enactments, are the following: The want of a system for the verification of the deaths of new-born children and nurse-children; the premature taking-out of infants for the purpose of obtaining the certificates of birth and baptism; the putting them out to nurse; the default of measures making vaccination obligatory; the absence of any law to regulate taking children in to nurse, and especially for any administrative and medical watching over the nurse-children; the persistence, especially in country districts, of injurious practices and prejudices, kept up by ignorance, respecting the care required by the children, and the adoption of the system of feeding the children too soon by hand.—*London Medical Record.*

NUTRITIVE MEAT-JELLY COMMENDED BY DR. ANSTIE.—Lean beef fillet, three pounds; lean veal, three pounds; lean mutton, three pounds; cut up small and put into a saucepan *with no water;* simmer (never boiling) by the side of the fire for eight hours; strain the liquid (from a small quantity of tasteless, insoluble fibre that remains), and let it jellify into a soft mass. This is an immensely concentrated *meat*, minus very little but the water which has been driven off; a teaspoonful or two of it is a wonderful support, and can be taken every hour with ease.

THE CHAMPION CHLOROFORM-TIPPLER.—Dr. W. W. Parker related, at the last meeting of the Virginia State Medical Society, the case of a man named Johnson, a blacksmith, who became addicted to chloroform-tippling. How much in quantity he swallowed is not stated, but he bought and drank three thousand dollars' worth in three years! His mind then became affected, and he imagined himself tricked. Meanwhile he fattened fifty pounds, and on ceasing the habit lived fifteen years in good health, and died from natural causes.—*The American Journal of Dental Science.*

THE death is announced of Dr. Arthur Jacob, of Dublin. He was born in 1790, and was the author of numerous papers on medical subjects, but his memory will be chiefly kept alive by the "membrana Jacobi" of the eye. He was the founder and original editor of the *Medical Press and Circular* of Dublin.

ONE hundred and thirty thousand pounds of bromine are stated to have been manufactured in the Ohio and Kanawha Valleys last year. One thousand pounds were produced in Pennsylvania.

IODINE CAUSTIC is prepared by dissolving four grammes of iodine in eight grammes of glycerin. It is used in lupus by applying it once every other day, and covering the parts with gutta-percha. This treatment is continued for several weeks.

NOTES AND QUERIES.

AMERICAN PUBLIC HEALTH ASSOCIATION.

The American Public Health Association will convene in Philadelphia, Tuesday, November 10, 1874, in accordance with the adjournment of the Annual Meeting. The following Order of Business has been adopted by the Executive Committee in compliance with Article XII. of the Constitution of the Association:

The meetings will be held at the College of Physicians, corner of Locust and Thirteenth Streets, Philadelphia.

ORDER OF BUSINESS.

Tuesday noon, November 10. The Session commences at noon.

(1) Registration of Members and others in attendance.

(2) Introductory Remarks by the President of the Association.

(3) A Paper on Excessive Infant Mortality in Cities, and the Means of its Prevention, by Prof. Henry Hartshorne, M.D., of Philadelphia, Pa.

(4) A Paper upon the Influence of Hereditary Diseases upon the Health of the People, with Suggestions of Methods of Prevention. By J. R. Black, M.D., of Ohio.

(5) The Health of Tenement Populations, and the Sanitary Wants of their Dwellings. By Edward H. Janes, M.D., of New York.

(6) A Report upon the Death-Rate in Towns of Michigan; and comparison of these with Dr. Farr's *Life Tables* of Health Districts of England. By H. B. Baker, M.D., Secretary State Board of Health of Michigan.

(7) A Report upon Hospital Construction. By J. S. Billings, M.D., Assistant-Surgeon U. S. Army.

(8) A Paper upon Hospital Architecture and the Perfect Ventilation of Hospital Wards. By Carl Pfeiffer, F.A.I.A., of New York.

(9) Conference of Sanitary Officers and others upon Methods and Experience in the Public Health Service.

[Closing at 6 P.M.]

DISCOURSES: TUESDAY EVENING.

First Discourse, by Rev. Samuel Osgood, D.D.: *The Relations of Health and the Higher Culture.*

Second Discourse, by Hon. L. H. Steiner, M.D., of Maryland: *Health a Prerequisite of National Success in Peace and in War.*

Third Discourse: *The Sanitary Relations of Hospitals, and the Economy of Perfect Care of the Sick and Hurt.*

WEDNESDAY, NOVEMBER 11.

(1) 9 A.M. Business Meeting and Reception of Voluntary Papers, etc.

(2) A Paper upon the Ground in Relation to Diseases. By Edwin M. Hunt, M.D., President of the Sanitary Commission of New Jersey.

(3) A Report upon the Deterioration of Vegetables and Fruits, as connected with their Gathering, Transportation, Storage, and Marketing. By S. C. Bussey, M.D., Washington, D.C.

(4) A Report upon the Sanitary Government, Vital Statistics, and the Methods of Public Health Administration in the Cities and large Towns of North America. By E. Harris, M.D., of New York.

(5) A Paper upon the question—Does Smallpox become Epidemic, or is it spread solely by its own Contagious Property? By Edwin Snow, M.D., Superintendent of Health, Providence, Rhode Island.

(6) A Report upon Yellow Fever on the Dry Tortugas. By Harvey E. Brown, M.D., Surgeon U. S. Army.

(7) 2 P.M. A Discourse by S. D. Gross, M.D., LL.D., D.C.L., Oxon, upon *The Factors of Disease and Death after Injuries, Parturition, and Surgical Operations.*

4 P.M. A Conference upon Laws and Methods of the Public Health Service of the different Cities and States. By Officers and Members of Boards of Health.

DISCOURSES: WEDNESDAY EVENING.

First Discourse: By Prof. Charles F. Chandler, M.D., LL.D.: *Practical Applications of Chemistry in the Public Health Service.*

Second Discourse: By Prof. Edward Orton, President of the Ohio Agricultural College: *Certain Relations of Geology to the Water Supplies of the Country.*

Third Discourse: By Gen. E. L. Viele, Civil Engineer: *Principles and Practice in Drainage and Sewerage, in connection with Water Supplies.*

THURSDAY, NOVEMBER 12.

9 A.M. Business Meeting and Election of Officers and Committees.

(1) State Medicine the Basis for the Elevation of the Standard of Medical Education. By Stephen Smith, M.D., of New York.

(2) A Paper upon Syphilitic Contamination and Dyscrasia, with reference to Public Health Interests. By Frederick R. Sturgis, M.D., of New York.

(3) A Paper upon Sanitary Relations of Pharmacy and the Materia Medica. By J. M. Maisch, Secretary American Pharmaceutical Association.

(4) A Paper upon "Hay Fever:" Original Researches with reference to Causation and Prevention. By George M. Beard, M.D., of New York.

(5) A Report upon the Sanitary Status of Colorado. By W. R. Whitehead, M.D., of Denver, Colorado.

(6) A Paper by Hon. Lorin Blodget, of Washington, D.C.

(7) Voluntary Reports and Papers.

4 P.M. Sanitary Conference upon Laws, Methods, and Experience in Public Health Service.

DISCOURSES: THURSDAY EVENING.

First Discourse: By Hon. Dorman B. Eaton, of Washington; *Health Laws and the Interests and Obligations of the State and National Governments pertaining thereto.*

Second Discourse: *The Duty and Resources of the National Government in the Encouragement of Public Health Measures and Sanitary Science.*

EXECUTIVE COMMITTEE:

President, Stephen Smith, M.D., New York; *First Vice-President*, Edwin M. Snow, M.D., Rhode Island; *Second Vice-President*, C. B. White, M.D., Louisiana; *Secretary*, Elisha Harris, M.D., New York; *Treasurer*, John H. Rausch, M.D., Illinois. S. O. Vanderpool, M.D., N.Y.; Edward Jarvis, M.D., Mass.; J. M. Toner, M.D., D.C.; Moreau Morris, M.D., N.Y.; J. J. Woodward, M.D., U.S.A.; A. N. Bell, M.D., N.Y.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

A CONVERSATIONAL meeting of the Philadelphia County Medical Society will be held Wednesday, November 11, at 8 o'clock P.M.

Dr. H. Lenox Hodge will read a paper on the subject of Excision in Hip-Joint Disease.

All regular practitioners of medicine in the city are invited.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM OCTOBER 27 TO NOVEMBER 2, 1874, INCLUSIVE.

SUMMERS, J. E., SURGEON.—Assigned to duty as Medical Director of this Department. G. O. 19, Department of the Platte, Oct. 24, 1874.

The following-named officers will report in person to the President of the Army Medical Board, now in session in New York City, for examination for promotion, and, on its completion, rejoin their respective stations: Assistant-Surgeons Albert Hartsuff, J. H. Janeway, J. R. Gibson, J. M. Brown, H. E. Brown, and Elliott Coues. S. O. 233, A. G. O., October 27, 1874.

KNICKERBOCKER, B., ASSISTANT-SURGEON.—To report in person to the President of the Army Medical Board, now in session in San Francisco, for examination for promotion, and, upon its completion, rejoin his proper station. S. O. 233, c. s., A. G. O.

CRONKHITE, H. M., ASSISTANT-SURGEON.—Relieved from duty in Department of the South, to report in person to the President of the Army Medical Board, New York City, for examination for promotion, and, upon its completion, to the Commanding General, Department of Arizona, for assignment to duty. S. O. 233, c. s., A. G. O.

ROSE, GEORGE S., ASSISTANT-SURGEON.—Relieved from duty in Department of Arizona, to report in person to the President of the Army Medical Board, New York City, for examination for promotion, and, upon its completion, by letter to the Surgeon-General. S. O. 233, c.s., A. G. O.

ELBREY, F. W., ASSISTANT-SURGEON.—Granted leave of absence for six months, with permission to go beyond sea. S. O. 234, A. G. O., October 28, 1874.

MATTHEWS, W., ASSISTANT-SURGEON.—Assigned to temporary duty at Fort Hamilton, New York Harbor. S. O. 213, Military Division of the Atlantic, October 28, 1874.

DICKSON, J. M., ASSISTANT-SURGEON.—To report in person to the President of the Army Medical Board, New York City, for examination for promotion, and, upon its completion, to the Commanding General, Department of the South, for assignment to duty. S. O. 233, c. s., A. G. O.